

FUEL CELL STACK MONITORING AND SYSTEM CONTROL

Abstract of the Invention

5 A control method for monitoring a fuel cell stack in a fuel cell system in which the actual voltage and actual current from the fuel cell stack are monitored. A preestablished relationship between voltage and current over the operating range of the fuel cell is established. A variance value between the actual measured voltage and the expected voltage magnitude for a given actual measured current is calculated and compared with a predetermined allowable variance. An output is generated if the calculated variance value exceeds the predetermined variance. The predetermined voltage-current for the fuel cell is symbolized as a polarization curve at given operating conditions of the fuel cell.

10

15 [Other polarization curves may be generated and used for fuel cell stack monitoring based on different operating pressures, temperatures, hydrogen quantities.]